Jellyfish Identification and Quantification in the San Francisco Estuary

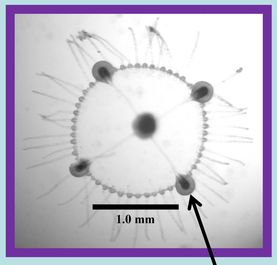
Amalia Borson[1], Lindsay Sullivan[2], Wim Kimmerer[2]

[1]Graduate College of Education, San Francisco State University, 1600 Holloway Ave., San Francisco, Ca. USA, 94132, amaliaborson@hotmail.com

[2]Romberg Tiburon Center for Environmental Studies, San Francisco State University, 3152 Paradise Dr., Tiburon Ca. USA, 92920

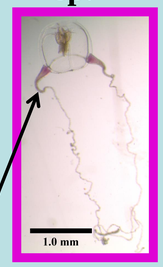
Identification

***Obelia* spp.**[4]



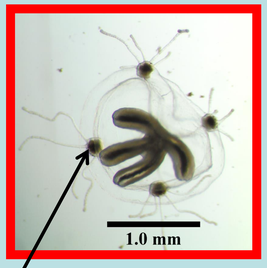
- 48-60 tentacles
- 4 spherical gonads
- Flat

***Amphenima* sp.**[1,5]



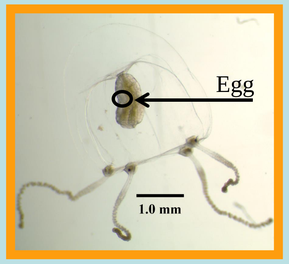
- 2 pink tentacles
- Yellow, folded gonads
- Bell shaped

Bougainvillia muscus[1,6,7]



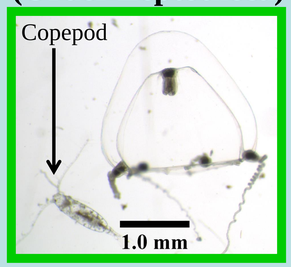
- 4 tentacle bulbs
- 3-5 tentacles/bulb
- Branched oral tentacles
- Bell shaped

Coryne eximia[1]



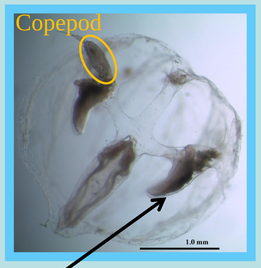
- 4 tentacles
- Gonads along gut
- Bell shaped

***Phialella* sp.**[8] **(Order Leptotheca)**



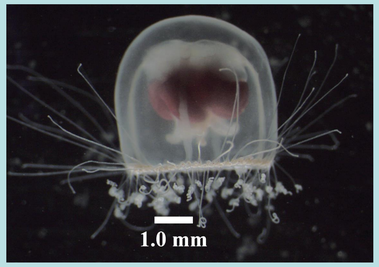
- Variable tentacle #
- Gonads along gut
- Bell shaped

Pleurobrachia bachei[5]



- 2 tentacles
- 8 rows of cilia
- Spherical

***Turritopsis* sp.**[1,9,10]



- 80-90 tentacles
- Red gonads
- Bell shaped

* Found in live tow, not abundance tow

Rationale

Previous studies in the San Francisco Estuary (SFE) incurred difficulties identifying small offshore jellyfish. Thus, jellyfish were reared to larger stages to aid in determining identification and abundance. This information is important for determining and monitoring invasions, habitat, and interactions with fish.

Objectives

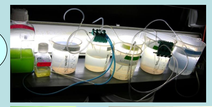
- Identify small jellies by rearing them until distinguishing characteristics are visible.
- Quantify the abundance of jellyfish in the SFE.

Methods

1

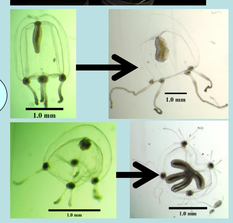
Two plankton tows were taken weekly from the Romberg Tiburon Center (RTC).

2



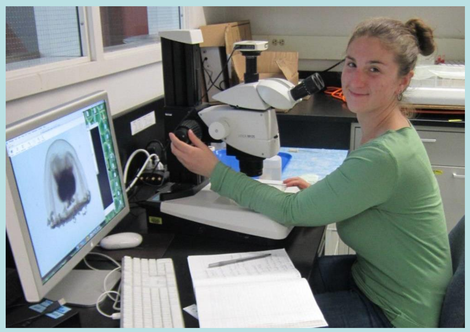
Jellyfish from one tow were reared in plastic buckets. Jellyfish were fed plankton (copepods) →

3



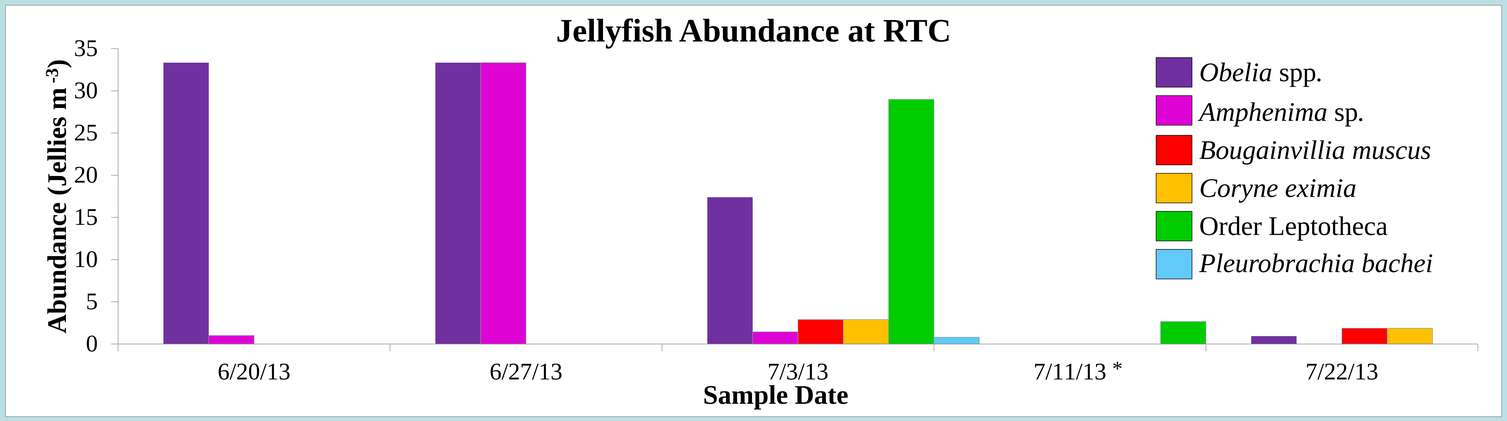
Day 1 Day 7

Adults were identified based on distinguishing features.[1,2,3]



4 Jellyfish from the second tow were preserved, counted, and measured.[1,2,3]

Abundance Results



Conclusions

- Seven jellyfish were identified to genus, three to species.
- ***Obelia* spp.**, ***Amphinema* sp.**, and medusae from the Order **Leptotheca** were the most abundant.
- This is the first record of ***Amphenima* sp.** and ***Phialella* sp.** medusae in the SFE.[1,5, 8,11]
- These jellyfish probably have little impact on fish populations due to their small size and relatively low abundances.

Acknowledgments and References

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